

We claim:

1. An avoidance system for steering an aircraft away from an exclusion zone including
transmitter means for transmitting a signal to the aircraft, said signal includes transmitter means identification and exclusion zone information; and
aircraft receiver means for receiving and processing said signal, said aircraft receiver means is operationally associated with a flight director system which is programmed to control and steer the aircraft;
wherein when a transmitter means signal is received and processed, the flight director system is engageable in accordance with said aircraft's flight profile and processed exclusion zone information to control and steer the aircraft away from the exclusion zone,
wherein the aircraft has a self checking means including a low power beacon installed on the aircraft and which periodically transmits a signal for checking the operational status of the receiver means for receiving and processing signals.
2. An avoidance system as claimed in claim 1, wherein when a transmitter means signal is received by the receiver means, an alert signal is transmitted from the aircraft to the relevant authorities.
3. An avoidance system as claimed in claim 2, wherein said alert signal includes the aircraft identification, transmitter means identification and exclusion zone information for the transmitter means.
4. An avoidance system as claimed in claim 1, wherein when a transmitter means signal is received by the receiver means, an alert signal is transmitted from the aircraft to the relevant authorities and wherein when a signal is transmitted from the beacon and the receiver means fails to receive or process the signal, an alert signal is transmitted from the aircraft to the relevant authorities.

5. An avoidance system as claimed in claim 4, wherein the avoidance system remains activated until the signal from the transmitter means is no longer received by the aircraft receiver means.
6. An avoidance system as claimed in claim 1, wherein the avoidance system remains activated until the signal from the transmitter means is no longer received by the aircraft receiver means.
7. An avoidance system as claimed in claim 1, wherein the exclusion zone has one or more outer warning zones where an alarm is activated when the aircraft enters the warning zone.
8. An avoidance system as claimed in claim 1, wherein the aircraft receiver means engages the flight director system to take suitable action when the transmitter means signal is not recognized, partially received or jammed.
9. An avoidance system as claimed in claim 1, wherein the aircraft receiver means includes an avoidance program with protocols where the avoidance system is not operational.
10. An avoidance system as claimed in claim 1, wherein the aircraft receiver means includes an avoidance program with protocols where the avoidance system is not operational and wherein the protocols include coordinate information of airports, runways and other suitable areas for the landing and departure of the aircraft.
11. An avoidance system as claimed in claim 10, wherein the coordinate information can be amended and updated and the coordinate information is checked as part of the initializing of the avoidance system during the preparation for flight.
12. An avoidance system as claimed in claim 1, wherein the flight director system can directly receive registered exclusion zone parameters from a satellite based system for updating purposes or when there is a receiving means failure.

13. An avoidance system as claimed in claim 1, wherein a preflight check is used to determine the operational status of the avoidance system and when the receiving means fails to receive and process a preflight check signal, an alert signal is transmitted from the aircraft to alert the relevant authorities and the flight director system is engaged to prevent the aircraft from taking off.

14. An avoidance system as claimed in claim 1, wherein the flight director system is engaged at a time and position determined by the flight profile and exclusion zone information.

15. An avoidance system as claimed in claim 1, wherein the flight director system controls the upward direction of the aircraft while providing the pilot with limited sideways maneuverability.